Draft Comprehensive Conservation Plan and Environmental Assessment

Red Rock Lakes National Wildlife Refuge

September 2008

Prepared by

U.S. Fish and Wildlife Service

Red Rock Lakes National Wildlife Refuge 27820 Southside Centennial Road Lima, MT 59739 406/276 3536

and

U.S. Fish and Wildlife Service, Region 6 Division of Refuge Planning PO Box 25486 DFC Lakewood, CO 80225 303/236 8145

Contents

Abbreviations	111
Summary	<i>i</i>
1 Introduction	1
1.1 Purpose and Need for the Plan	
1.2 The U.S. Fish and Wildlife Service and the Refuge System	
1.3 National and Regional Mandates	
1.4 Refuge Contributions to National and Regional Plans	
1.5 Ecosystem Description and Threats	
1.6 Planning Process	
2 The Refuge	18
2.1 Establishment, Acquisition, and Management History	13
2.2 Vision and Goals	20
3 Alternatives	29
3.1 Alternatives Development	29
3.2 Alternatives Considered but Eliminated	29
3.3 Elements Common to All Alternatives	30
3.4 Description of Alternatives	30
4 Affected Environment	63
4.1 Physical Environment	63
4.2 Biological Resources	
4.3 Cultural Resources	
4.4 Special Management Areas	
4.5 Visitor Services	
4.6 Socioeconomic Environment	
4.7 Operations	88
5 Environmental Consequences	
5.1 Analysis Methods	
5.2 Effects Common to all Alternatives	
5.3 Description of Consequences by Resource	92
6 Implementation of the Proposed Action (Draft CCP)	103
6.1 Proposed Goals, Objectives, and Strategies	104
6.2 Personnel	124
6.3 Step-Down Management Plans	124
6.4 Partnership Opportunities	124
6.5 Monitoring and Evaluation	124
6.6 Plan Amendment and Revision	125
Glossary	127
Appendices	
A Key Legislation and Policies	
B List of Preparers, Consultation, and Coordinators	137

\mathbf{C}	Puk	olic Involvement	139		
D	- I				
\mathbf{E}	r				
\mathbf{F}	Fir	e Management Program	183		
Bibli	ogra	phy	187		
Figur	es				
Ū		Location of Red Rock Lakes National Wildlife Refuge, Montana	2		
		Physiographic areas of the United States			
		Upper Missouri, Yellowstone, and Upper Columbia rivers ecosystem map			
	4	CCP and environmental analysis process steps	. 10		
	5	Red Rock Lakes National Wildlife Refuge approved acquisition boundary			
		and acquired lands—refuge base map			
		Conservation easements within the Centennial Valley			
		Alternative A, current visitor service areas and facilities map			
		Hunting program boundaries proposed in alternative B			
		Hunting program boundaries proposed in alternative C			
		Hunting program boundaries proposed in alternative D	51		
	11	totals between 1948 and 2005 (Service data)	64		
	12	Mean annual, March, and April air temperatures at Lakeview, Montana,	04		
		between 1949 and 2005. Significant increases are shown for the months			
		of March and April (Service data)	65		
	13	Representative flow rates for Red Rock, Odell, and Tom Creeks at			
		Red Rock Lakes National Wildlife Refuge (Service data)	69		
	14	Vegetation classifications found in Red Rock Lakes National Wildlife Refuge	73		
		Habitat types found in Red Rock Lakes National Wildlife Refuge			
		Wetland types found in Red Rock Lakes National Wildlife Refuge	76		
	17	Designated wilderness within the acquisition boundary of Red Rock Lakes National Wildlife Refuge	85		
	18	Adaptive management process			
Table	S				
		Planning process summary and timeline for Red Rock Lakes National Wildlife Refuge			
		Land acquisition history of Red Rock Lakes National Wildlife Refuge, 1935–2007			
		Conservation easement acquisition history within the Centennial Valley, 2001–2006	20		
	4	Summary of alternatives for the comprehensive conservation plan, Red Rock Lakes National Wildlife Refuge	38		
	5	Current base funded staff at Red Rock Lakes National Wildlife Refuge, Montana			
		Nesting and foraging requirements for the five most commonly detected bird			
		species in willow riparian habitat at Red Rock Lakes National Wildlife Refuge, Montana			
		Habitat requirements for target wet meadow bird species			
		Bird species dependent on sagebrush habitat for breeding and nesting			
		Current and proposed staff, Red Rock Lakes National Wildlife Refuge, Montana			
	10	Step-down management plans for Red Rock Lakes National Wildlife Refuge, Montana	124		

Abbreviations

ARM adaptive resource management **Administration Act** National Wildlife Refuge System Administration Act **ATV** all-terrain vehicle AUM animal unit months BP before present Bureau of Land Management **BLM CCP** comprehensive conservation plan **CFR** Code of Federal Regulations **CWCS** comprehensive wildlife conservation strategy wetland management districts districts **DNRC** Montana Department of Natural Resources and Conservation environmental assessment EA **FMP** fire management plan **FONSI** Finding of No Significant Impact GIS Geographic Information System GS general pay schedule **IBA** Important Bird Area **Improvement Act** National Wildlife Refuge System Improvement Act of 1997 **MFWP** Montana Fish, Wildlife, and Parks Montana Natural Heritage Program **MTNHP NEPA** National Environmental Policy Act NOI notice of intent PL public law **PM**₁₀ Particulate matter Red Rock Lakes National Wildlife Refuge refuge **Refuge System** National Wildlife Refuge System **RONS** Refuge Operating Needs System **RMP** Rocky Mountain population SAV submerged aquatic vegetation sandhills Centennial Sandhills U.S. Fish and Wildlife Service Service U.S. United States **USDA** U.S. Department of Agriculture **USFWS** U.S. Fish and Wildlife Service **USGS** U.S. Geological Survey WCS water control structure WG wage grade pay schedule **WMD** wetland management district **WPA** waterfowl production area **WPA** Works Progress or Project Administration

Definitions of these and other terms are in the glossary, located after Chapter 6.

wildland-urban interface

WUI

Summary

The following summary provides a brief overview of this draft comprehensive conservation plan and environmental assessment for Red Rock Lakes National Wildlife Refuge, including (1) a general description; (2) purposes of the refuge; (3) vision and goals; (4) alternatives considered, including the proposed action; and (5) the decision to be made regarding the proposed comprehensive conservation plan.

GENERAL DESCRIPTION

The U.S. Fish and Wildlife Service has developed this draft comprehensive conservation plan to provide a foundation for the management and use of Red Rock Lakes National Wildlife Refuge. This refuge is one of the most remote in the lower 48. It is located in the Centennial Valley in southwestern Montana in Beaverhead County, 47 miles west of West Yellowstone and 38 miles east of the town of Lima. This 47,756-acre refuge sits at 6,670 feet above sea level and lies east of the Continental Divide near the uppermost reach of the Missouri drainage.

Historically, management focused on protecting and enhancing the trumpeter swan population at the refuge. In the 1930s, the refuge was their last known breeding location. Today, swans can still be seen breeding in the valley, but the intensive management of swan populations (through feeding and raising young) has been altered in favor of allowing the swans to thrive under mostly natural conditions.

The refuge has one of the most naturally diverse areas in the National Wildlife Refuge System. The refuge boasts the largest wetland complex within the Greater Yellowstone ecosystem as well as expansive tracts of grassland and sagebrush-steppe habitats and a small amount of midelevation forested areas. These habitats support over 200 species of birds, including peregrine falcons, bald eagles, short-eared owls, sandhill cranes, sage grouse, and numerous species of waterfowl and waterbirds. Common mammals include Shiras moose, elk, mule and whitetailed deer, badger, covote, and red fox. In addition, wolves and grizzly bears have been documented using the refuge in recent years. There is also a remnant population of native lacustrine/adfluvial Arctic grayling that occur on the refuge. This population lives in the lake and breeds in the river.

A full-time staff of five employees and various summer temporaries manage and study the refuge habitats and maintain visitor facilities. Domestic livestock grazing and prescribed fire are the primary management tools used to maintain and enhance upland habitats. Currently, four grazing cooperators are using refuge lands. Water level manipulation occurs in some areas of the refuge to improve wetland habitats.

Approximately 12,000 people visit the refuge annually. Two refuge roads and three county roads that pass through the refuge account for the majority of visitor use. The refuge is open to limited fishing, with the majority of fishing occurring on Red Rock Creek. In addition, the refuge is open to limited hunting of ducks, geese, coots, elk, pronghorn, moose, mule deer, and white-tailed deer.

ESTABLISHMENT HISTORY

On April 22, 1935, President Franklin D. Roosevelt established the Red Rock Lakes Migratory Waterfowl Refuge (later named "Red Rock Lakes National Wildlife Refuge" on July 19, 1961) under Executive Order 7023 "as a refuge and breeding ground for wild birds and animals." On September 4, 1935, President Roosevelt enlarged the refuge under Executive Order 7172 "provided, that any private lands within the areas described shall become a part of the refuge upon the acquisition of title or lease thereto by the United States."

During the 70 years since the executive boundary was established, the U.S. Fish and Wildlife Service has continued to acquire lands from willing landowners or receive land donations. The Service currently owns 47,756 acres within this approved boundary.

LEGISLATIVE PURPOSES

Every refuge has a purpose for which it was established. The purpose is the foundation upon which to build all refuge programs, from biology and visitor services, to maintenance and facilities. No action undertaken by the U.S. Fish and Wildlife Service or public may conflict with this refuge purpose. The refuge purposes are found in the legislative acts or administrative orders that provide the authorities to either transfer or acquire a piece of land for a refuge. Over time, an individual refuge

may contain lands that have been acquired under a variety of transfer and acquisition authorities, giving a refuge more than one purpose. The goals, objectives, and strategies identified in the draft comprehensive conservation plan are intended to support individual purposes for which the refuge was established.

The legislative purposes for Red Rock Lakes National Wildlife Refuge include the following:

- "As a refuge and breeding ground for wild birds and animals." (Executive Order 7023, dated April 22, 1935)
- 2. "For use as an inviolate sanctuary, or for any other management purpose, for migratory birds." (Migratory Bird Conservation Act)
- 3. "Suitable for (a) incidental fish and wildlifeoriented recreational development, (b) the protection of natural resources, (c) the conservation of endangered species or threatened species ... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors." (Refuge Recreation Act)
- 4. "The conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions." (Emergency Wetlands Resources Act)
- 5. "For the development, advancement, management, conservation, and protection of fish and wildlife resources ... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude." (Fish and Wildlife Act)

REFUGE VISION

The vision for Red Rock Lakes National Wildlife Refuge is based on the establishing purposes of the refuge, resource conditions and potential, and the issues identified during the planning process (see Section 2.2).

The majestic Centennial Valley of southwest Montana is an expansive mosaic of mountain wetlands, grasslands, shrub lands, and forests framed by dramatic mountain peaks. Through partnerships and conservation programs, the valley has maintained its biological integrity and is a working landscape that remains largely undeveloped.

To this end, the Red Rock Lakes National Wildlife Refuge is a conservation leader in the valley working to maintain and restore natural processes to create and sustain native habitat for migratory and resident fish and wildlife. Visitors have a sense of solitude and wildness that lifts their spirits and stirs their souls. This first-hand experience with the refuge encourages people to participate as stewards, not only of the refuge, but also of the natural resources in their own communities.

REFUGE GOALS

The goals described below help the staff achieve the vision for Red Rock Lakes National Wildlife Refuge.

LAKE, POND, AND MARSH HABITAT GOAL

Provide habitat for breeding and migrating birds, native fishes, and resident wildlife that maintains the biological diversity and integrity of montane wetland systems.

RIPARIAN HABITAT GOAL

Maintain the processes necessary to sustain the biological diversity and integrity of native riparian vegetation for breeding birds, native fishes, and wintering ungulates.

WET MEADOW, GRASSLAND, AND SHRUB-STEPPE HABITAT GOAL

Provide structurally complex native meadow, grassland, and shrub-steppe habitats, within a watershed context, for sagebrush-dependent species, upland-nesting migratory birds, rare plant species, and other resident wildlife.

ASPEN FOREST, MIXED CONIFEROUS FOREST, AND WOODLAND HABITAT GOAL

Create and maintain aspen stands of various age classes within a mosaic of coniferous forest and shrub land for cavity-nesting birds and other migratory and resident wildlife.

VISITOR SERVICES AND CULTURAL RESOURCES GOAL

Provide quality wildlife-dependent recreation, interpretation, and outreach opportunities that nurture an appreciation and understanding of the unique natural and cultural resources of the Centennial Valley, for visitors and local community members of all abilities, while maintaining the primitive and remote experience unique to the refuge.

REFUGE OPERATIONS GOAL

Prioritize for wildlife first and emphasize the protection of trust resources in the utilization of staff, funding, and volunteer programs.

ALTERNATIVES

ALTERNATIVE A: No ACTION

Alternative A, the no-action alternative, reflects the current habitat management of the refuge. It provides the baseline against which to compare other alternatives. It is also a requirement of the National Environmental Protection Act that a no-action alternative be addressed in the planning process.

ALTERNATIVE B: PROPOSED ACTION

Management under alternative B acknowledges the importance of naturally functioning ecological communities on the refuge. However, changes to the landscape (for example, human alterations to the landscape, created wetlands, and species in peril requiring special management actions) prevent management of the refuge solely as a naturally functioning ecological community. Because some of these changes can be significant, some refuge habitats would require "hands on" management actions during the life of this plan. Visitor services programs (such as hunting, fishing, wildlife observation and photography, outreach, and interpretation programs) would be improved and expanded while maintaining the wilderness characteristics of the refuge.

ALTERNATIVE C: WETLAND RESTORATION

Management under alternative C acknowledges the importance of a naturally functioning ecosystem. Management action emphasis would be placed on allowing wetland and riparian habitats to function naturally through the restoration of most created and all modified wetlands and elimination of all water management structures. Visitor services programs (such as hunting, fishing, wildlife observation and photography, environmental education, outreach, and interpretation programs) would be improved and expanded while maintaining the wilderness characteristics of the refuge.

ALTERNATIVE D: ECOLOGICAL RESTORATION

Management under alternative D further Management under alternative D further acknowledges the importance of a naturally functioning ecosystem. Management action emphasis would be placed on the restoration of all natural processes, including the restoration of all wetland and riparian habitats. The refuge would participate in state programs to reintroduce bison if they become designated as free-ranging wildlife. Also, the refuge

would place emphasis on creating a wilderness setting in all areas away from refuge headquarters. Visitor services programs would promote a wilderness experience with little to no signage or interpretation

DECISION TO BE MADE

The environmental assessment describes and analyzes four alternatives for achieving the above goals. Based on this analysis, the U.S. Fish and Wildlife Service's regional director for region 6 (Mountain-Prairie Region) will decide which alternative will be selected to manage the refuge for the next 15 years.